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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,092

07/18/2003

Joseph W. Roos

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EXAMINER

MARCANTONI, PAUL D

ART UNIT

PAPER NUMBER

1755

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/06/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/623,092

Applicant(s)

ROOS ET AL.

Examiner

Paul Marcantoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,8,10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,8,10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Applicant's arguments filed 2/12/07 is acknowledged and have been fully considered but they are not persuasive.

New Matter:

The new matter rejection is withdrawn because applicants have provided their supported range of about 20 – 500 ppm in their independent claims (e.g. claim 1 and others). However, applicants inadvertently used the term “wt%” (20 – 500 wt% of manganese to the coal) when the proper unit should have been ---by wt.----. The claims using this range should all read --about 20 to 500 ppm by weight of manganese to the coal---. This revision would resolve this issue and this specific amendment *would be entered even after final rejection* to reduce any remaining issues regarding ^{it.} ~~new matter~~.

Obviousness Type Double Patenting:

Claims 1, 3-5, 7, 8, 10, and 12-20 remain provisionally rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-21 of copending application no. 10/623,686 (US Pat Pub 2005/0016057-Factor et al.). This is a provisional obviousness type double patenting rejection. Applicants have not addressed the ODP rejection again and state they would file a terminal disclaimer upon indication of allowable subject matter. This is not a proper response to the ODP and any terminal disclaimer submission after this office action can be considered untimely. Applicants really had only two options to overcome this rejection. The first was to timely submit the terminal disclaimer which they did not do. The second would be to argue whether the ODP is proper. They seem to agree that the

ODP is proper because they were willing to file a terminal disclaimer but only after indication of allowable claims.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicants again did not submit a terminal disclaimer and thus the ODP rejection above remains. Factor et al. also teach an amount of manganese compound of about 5 to 100 ppm of the coal (claim 8, p.3) which overlaps applicants' claims requiring at least 20 ppm wt% of coal.

35 USC 102/103:

Claims 16-18 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kukin (US Patent No. 3,837,820).

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Kukin '820 teaches a coal/combustion additive (see col.1, lines 40-45) that is a manganese containing substance that explicitly teaches reducing the amount of carbon in the fly ash because manganese is known to be a carbon destroying catalyst (see col.4, lines 5-9) thus anticipating applicants' claimed invention. Further, even if not anticipated, overlapping ranges of amounts of the same components in the claimed coal additives would have been prima facie obvious to one of ordinary skill in the art.

Kukin further teaches adding an amount of 40 ppm manganese to the fuel (see examples 8-10. Though the fuel used was fuel oil in the examples, Kukin also teaches that the fuel may also be coal (see col.2, lines 55-65) and thus this amount applies to any fuel whether fuel oil or coal. This amount overlaps applicants' range of at least 20 ppm wt% of the coal.

Also, Kukin does not teach an organo-metallic manganese compound yet an organometallic manganese compound is a species that still falls in the genus of "manganese containing substance that reduces the carbon in fly ash". One of ordinary skill in the art would have understood to use any organic or inorganic manganese containing compound for reducing carbon in fly ash.

35 USC 103:

Claims 1, 3-5, 7, 8, 10, and 12-20 are rejected under 35 USC 103(a) as obvious over

Kerley '992, Kukin '503, or Rolfe '916 alone or in view of Kukin '820, Oates '052, Wu '216, Hurt '089, Itoh et al. '561, and Zacarias et al. '585 B2

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Kerley '992 teaches that his manganese containing substance (ie cyclomatic metal compound) is used to remove carbon from the combustion products. One of ordinary skill in the art would have understood that fly ash is a combustion product (see col.3, last three lines and col.4 lines 1-8). Kerley teaches he wants to insure the complete absence of carbon in his combustion product (ie fly ash) and thus he does so by using the manganese compounds to carry through this function. Kerley '992 also teaches an amount of manganese compound added of

Even if that is not enough, Kukin '820 teaches that manganese containing substances such as those within Kerley's teaching would have been understood by one of ordinary skill in the art and known by that person to reduce the amount of carbon in the fly ash because manganese is known to be a carbon destroying catalyst (col.4, lines 5-9).

Kukin '503 teaches a coal additive (col.1 lines 43-45) that is an activated manganese that can be used to improve the fuel's (e.g. coal) burning properties to prevent buildup of carbon deposits. Hence, Kukin '503 teaches a desire to reduce the amount of carbon. Kukin '503 also teaches his activated manganese additive as a "smoke reducing and soot destroying catalyst". Note soot is unburned carbon and Kukin teaches the reduction of carbon particles including those on the combustion products such as fly ash in a coal burning process.

Again, even if that is not enough, Kukin '820 teaches that manganese containing substances such as those within Kukin '503' teaching would have been understood by one of ordinary skill in the art and known by that person to reduce the amount of carbon

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in the fly ash and other combustion products because manganese is known to be a carbon destroying catalyst (col.4, lines 5-9). Kukin '503 also teach an amount of 60-120 ppm of manganese and as little as 10-20 ppm of manganese in the fuel oil (see col.3, lines 12-16) The use of a specific type of fuel is not limited to fuel oil and can also be applied to coal (see col.1, lines 35-44, especially, line 44).

Rolfe '916 teaches it is known to add manganese complex additive to reduce carbon particles (see, for example, col.2, lines 67-70). Again, even if that is not enough, Kukin '820 teaches that manganese containing substances such as those within Rolfe '916 teaching would have been understood by one of ordinary skill in the art and known by that person to reduce the amount of carbon in the fly ash and other combustion products because manganese is known to be a carbon destroying catalyst (col.4, lines 5-9). Kukin further teaches adding an amount of 40 ppm manganese to the fuel (see examples 8-10. Though the fuel used was fuel oil in the examples, Kukin also teaches that the fuel may also be coal (see col.2, lines 55-65) and thus this amount applies to any fuel whether fuel oil or coal.

Response:

The examiner gratefully acknowledges that applicants held that the previous office action provided a detailed analysis of the prior art and instant invention though applicants may disagree with the examiner's position. The applicants hold that there may be misunderstandings with respect to the present invention at a fundamental level.

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The examiner has read what the applicants consider is a misunderstanding but respectfully disagree.

The applicants state that coal is made up of carbon and ash in its most basic form. The examiner disagrees in part because coal that is unfired is not made up of ash. The examiner agrees coal is a carbonaceous material. The carbon that is in ash (e.g. fly ash) is a residue of the combustion process of burning coal. The examiner has already indicated that carbon is still present as a residue in fly ash (see secondary references Oates '052, Wu '216, Hurt '089, Itoh et al. '561, and Zacarias et al. '585 B2 which teach this as fact).

The examiner also understands applicants' claimed invention of lowering carbon in fly ash. He understands it is not using residual manganese in the coal itself but a separate manganese substance or compound that is added separately to do the exact thing applicants do for their own invention; that is, lowering the carbon amounts in fly ash. It is further noted that the amount of manganese in parts per million is the active ingredient in reducing the amount of carbon in ash and not the organic carrier that binds the manganese. The applicants' own specification even supports the examiner's position with references such as Kukin (e.g. Kukin '820) because they admit and acknowledge the additive can be inorganic or organic compounds for use as carriers of the manganese; the active ingredient that reduces carbon in fly ash (see Summary on page 3 of applicant' specification). The examiner also notes that the amounts of manganese in parts per million in the prior art used does overlap the amount of manganese in applicants claims for the purposes of reducing carbon content in fly ash.

The applicants also state that the examiner has used *hindsight* in his rejection of claims. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). The examiner maintains his rejection is proper and not unfair and provides the proper analysis and motivation consistent with 35 USC 102 and 35 USC 103.

Finally, the applicants are also referred to the 10/12/06 office action in its entirety, especially the response to arguments section wherein the examiner provides a detailed analysis of why he holds his position is correct and the prior art meets their instantly claimed invention.

It is the examiner's position that he has fully responded to applicants' arguments/remarks and the finality of this office action is now proper. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
Art Unit 1755